

REMARKS

In an Office Action mailed January 7, 2010, claims 32, 34-40, 48, 52-58, 64, and 66-76 were rejected. Herein, claims 32, 48, and 67 have been amended. Applicants respectfully submit that no new matter has been added. Applicants respectfully request further examination and reconsideration of the present application based on the following remarks.

I. Claim Rejections under 35 U.S.C. 102(e)

Claims 32, 34-40, 48, 52-58, 64, and 66-76 were rejected under 35 U.S.C. 102(e) as being unpatentable over Furumiya et al. (US 6,894,965, hereafter “Furumiya”). Applicants respectfully request reconsideration of the above rejection based on the following.

Claim 32 recites shifting a position of a second pulse edge counted from a starting edge of a recording pulse train for forming marks and spaces, depending on a result of a classifying, to adjust the recording pulse train, wherein the recording pulse train includes a first pulse and at least one pulse subsequent to the first pulse, and the second pulse edge corresponds to a falling edge of the first pulse. Applicants respectfully submit that this feature of claim 32 is not disclosed, suggested, or otherwise rendered obvious by Furumiya.

Furumiya is directed to a method of using a recording pulse to record a mark on a recording medium and a method of adjusting the recording pulse (Col. 1, Lines 7-12). In particular, Furumiya discloses using a recording pulse train having a single recording pulse 101 or a recording pulse train having a recording pulse 605 including a first step 615 and a second step 600 (FIG. 5 and FIG. 6).

In other words, the recording pulse train as disclosed in Furumiya is merely a singular pulse (i.e., item 101) or a stepped shape of a singular pulse (i.e., the pulse 605 having a first step 615 and a second step 600). Thus, Furumiya does not disclose a recording pulse train having a first pulse and at least one pulse subsequent to the first pulse, i.e., a recording pulse train having at least two pulses.

Further, FIG.2 of Furumiya is a schematic view illustrating a method of adjusting of a recording pulse train according to Furumiya. In particular, FIG. 2 illustrates the adjusting of stepped pulses 241 and 242 having first part pulses 203 and 206, respectively, and second part pulses 204 and 207, respectively. In this regard, Applicants note that Furumiya merely illustrates that only the rising edge 217 and 219 of the first part pulse 203 and 206 and the falling edge 223 and 225 of the second part pulse 204 and 207 are adjusted.

Thus, even if stepped pulses 241 and 242 of Furuyama may be considered two pulses, Furumiya fails to disclose that the falling edge of the first part pulse of the stepped pulse is adjusted.

In contrast to Furumiya, the presently claimed invention discloses a recording pulse train having at least two pulses in which the falling edge of the first pulse is adjusted.

In particular, claim 32 recites shifting a position of a second pulse edge counted from a starting edge of a recording pulse train for forming marks and spaces, depending on a result of a classifying, to adjust the recording pulse train, wherein the recording pulse train includes a first pulse and at least one pulse subsequent to the first pulse, and the second pulse edge corresponds to a falling edge of the first pulse.

Applicants note that the above-noted feature of claim 32 allows the starting end position of the mark to be precisely controlled.

In view of the above, Applicants respectfully submit that Furumiya fails to disclose, suggest, or otherwise render obvious shifting a position of a second pulse edge counted from a starting edge of a recording pulse train for forming marks and spaces, depending on a result of a classifying, to adjust the recording pulse train, wherein the recording pulse train includes a first pulse and at least one pulse subsequent to the first pulse, and the second pulse edge corresponds to a falling edge of the first pulse.

Therefore, claim 32 is patentable over Furumiya.

Further, claims 34-40, 64, and 69-72 are patentable over Furumiya based at least on their dependency from claim 32.

Regarding claim 48, Applicants note that claim 48 has been amended in a manner similar to claim 32. In particular, claim 48 recites a recording waveform generator operable to create a recording pulse train for creating marks and spaces in which a position of a second pulse edge counted from a starting edge of the recording pulse train is shifted depending on the result of a classification performed by a classifying unit, wherein the recording pulse train includes a first pulse and at least one pulse subsequent to the first pulse, and the second pulse edge corresponds to a falling edge of the first pulse. Applicants respectfully submit that this feature of claim 48 is not disclosed, suggested, or otherwise rendered obvious by Furumiya for reasons similar to those discussed above with respect to claim 32. Therefore, Applicants respectfully submit that claim 48 is patentable over Furumiya.

Further, claims 52-58, 66, and 73-76 are patentable over Furumiya based at least on their dependency from claim 48.

Regarding claim 67, Applicants note that claim 67 has been amended in a manner similar to claim 32. In particular, claim 67 recites shifting a position of a second pulse edge counted from a starting edge of a recording pulse train for forming marks and spaces, depending on a result of a classifying, to adjust the recording pulse train, wherein the recording pulse train includes a first pulse and at least one pulse subsequent to the first pulse, and the second pulse edge corresponds to a falling edge of the first pulse. Applicants respectfully submit that this feature of claim 67 is not disclosed, suggested, or otherwise rendered obvious by Furumiya for reasons similar to those discussed above with respect to claim 32. Therefore, Applicants respectfully submit that claim 67 is patentable over Furumiya.

Further, claim 68 is patentable over Furumiya based at least on its dependency from claim 67.

II. Conclusion

Therefore, for at least the reasons presented above, Applicants respectfully submit that independent claims 32, 48, and 67, as well as the claims depending therefrom, are clearly allowable over the prior art of record.

In view of the foregoing amendments and remarks, Applicants respectfully submit that the present application is clearly in condition for allowance. An early notice thereof is earnestly solicited.

If, after reviewing this Amendment, the Examiner feels there are any issues remaining which must be resolved before the application can be passed to issue, Applicants respectfully request that the Examiner contact the undersigned by telephone in order to resolve such issues.

Respectfully submitted,

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